Instruction Manual

Human CD3+ Cell Removal Beads

Description

TargetMol's Human CD3+ Cell Depletion Beads utilize covalent coupling technology to immobilize anti-human CD3 antibodies onto the bead surface, enabling efficient depletion of CD3+ cells from human peripheral blood mononuclear cells (PBMCs) or human peripheral blood white blood cells (WBCs) following red blood cell lysis.

Recommended Products

1. Mouse Cells

	Spleen	Lymph Nodes	Peripheral Blood	Bone Marrow	Tumor Tissue
$CD3^+$ T Cells	C0061		/	/	/
$CD4^+$ Cells	C0062（Preferred）, C0067（Optional）		C0067	/	C0067
$CD8^+$ Cells	C0063（Preferred）, C0068（Optional）		C0068	/	C0068
Neutrophils	C0064	/	C0064	C0064	/
CD3+ Cell Depletion	C0152	C0152	/	/	/
CD3/CD28 TCell Activatioin	C0180	/	/	/	/
B Cells	C0218	C0218	/	C0218	/

2. Human Cells

	Peripheral Blood	Cord Blood
$CD3^+$ T Cells	C0065	/
$CD34^+$ Cell Enrichment	C0066	C0066
$CD4^+$ T Cells	C0148	/
$CD8^+$ T Cells	C0149	/
CD3/CD28 T Cell Activation	C0150	/
$CD66b^+$ Cells	C0151	/
Neutrophils	C0216	/
CD3+ Cell Depletion	C0217	/

Product Features

1. High efficiency: Achieves a depletion rate of over 99%.
2. Easy to use: No separation column required.
3. Fast workflow: CD3+ cell depletion can be completed in just 30 minutes.

Application

Suitable for the depletion of CD3+ cells from human PBMCs or WBCs.

Components

Cat. No.	Product Name	Packing (for 5×10^8 cells)	Packing (for 2×10^9 cells)
C0217	Human CD3+ Cell Removal Beads	250 μL	1 mL

Instructions

Depletion of CD3+ Cells from Human PBMCs or WBCs

1. After obtaining human PBMCs or WBCs, count the cells and resuspend them in 450 μL of sorting buffer. Adjust the cell concentration to 1×10^8 cells/mL.

Note: Recommended sorting buffer formulations:

- PBS containing 2 mM EDTA and 2% FBS; or
- PBS containing 2 mM EDTA and 0.5% BSA.

The buffer should be sterilized by filtration through a 0.22 μm membrane filter before use.

2. Magnetic bead pretreatment:
Vortex the magnetic beads thoroughly to resuspend them. Transfer the required amount of beads into a 1.5 mL centrifuge tube, add 1 mL sorting buffer, and centrifuge at 10,000 g for 1 min. Discard the supernatant. Repeat the washing step once. Resuspend the beads in sorting buffer to the original volume.
For example, if 50 μL of beads are used for washing, resuspend the beads in 50 μL sorting buffer after washing.
3. Add 450 μL of the cell suspension (containing 1 × 10^8 cells) to the bottom of a sterile flow cytometry tube. Add 50 μL of pretreated magnetic beads to the tube, mix gently, and incubate on a rotator at room temperature for 30 min.
Note:
When adding cells to the flow tube, avoid dispensing along the tube wall.
Depending on the type of magnetic separator used, centrifuge tubes may also be used for cell separation.
If a larger number of cells is processed, the amount of magnetic beads should be increased proportionally. For example, for sorting 1.5 × 10^8 cells, add 675 μL cell suspension and 75 μL magnetic beads into a 1.5 mL centrifuge tube.
If fewer than 5 × 10^7 cells are processed, adjust the cell suspension volume to 225 μL and add 25 μL magnetic beads.
4. After incubation, add sorting buffer to the flow tube to bring the total volume to 3 mL. Gently pipette up and down 10 times to mix. Avoid vigorous shaking or inversion mixing.
5. Place the flow tube containing the cells on a magnetic separator and let it stand for 5 min.
6. The target cells are contained in the supernatant. Carefully pour the cell suspension into a sterile centrifuge tube while keeping the flow tube on the magnetic separator. Centrifuge at 500 g for 5 min, discard the supernatant, and collect the cells.
7. Wash the cells according to experimental requirements, then resuspend them in the desired buffer or culture medium for downstream molecular biology or cell biology experiments.

Storage

Store at 4 ℃ for 2 years.

Precautions

1. Avoid freezing any components of the kit. Magnetic beads should be stored in the storage solution to prevent drying out.
2. Before removing the magnetic beads from the storage tube, gently but thoroughly resuspend them to ensure a homogeneous suspension. Avoid generating bubbles during handling.
3. It is recommended to use high-quality pipette tips and reaction tubes to minimize sample loss caused by bead or solution adhesion.
4. This product is intended for use in cell enrichment without subsequent dissociation. The resulting CD3+ cells will remain labeled with antibodies and magnetic beads, making them suitable for direct lysis and downstream detection.
5. It is recommended to use a magnetic separator with a magnetic field strength greater than 7000 Gs. Insufficient magnetic strength may affect the sorting performance.
6. The product is for R&D use only, not for diagnostic procedures, food, drug, household or other uses.
7. Please wear a lab coat and disposable gloves.